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DISEASES OF THE NERVOUS SYSTEM

A PRACTICAL JOURNAL ON PSYCHIATRY AND NEUROLOGY

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DISEASES of the NERVOUS SYSTEM

(PUBLISHED MONTHLY)

A PRACTICAL JOURNAL ON PSYCHIATRY AND NEUROLOGY

Neuropsychiatry at the Great Lakes Naval Training Center*

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Functions

Psychiatric screening is the systematic interviewing of all recruits in an attempt to weed out in advance those who are unfit for Service and who may eventually break down. The importance of this procedure is manifest when we consider the terrific toll in mental casualties and future governmental expenditures. It is estimated that a single mental casualty costs the government $30,000 to $50,000. One can readily appreciate then, what careful screening can achieve for the individual and the government and taxpayer. Furthermore, the danger to personnel who may be jeopardized by a psychiatric problem is most serious.

Mental casualties in the last war were numerous indeed and to date in World War II, well over 50% of all military hospital beds are occupied by neuropsychiatric cases. Grave damage can be done to the efficiency and morale of fighting units by the presence of unstable or unreliable officers and men. From the beginning of recruiting for the present war, attempts have been made to reduce the number of these individuals entering the Armed Forces.

Many of the nation's psychiatrists have been actively engaged in the initial psychiatric interviews at draft boards and induction centers or are serving on psychiatric advisory boards. Many are in the Armed Forces. Gradually some standardization of procedures has been developed. There has been interchange of Army and Navy neuropsychiatric personnel and visits to various reception centers to study and systematize the technique of interview. However the final decision of rejection or retention in Service must be made at the training station or center. In the Navy, this responsibility rests with the various Neuro-Psychiatric Units which have been established in all major naval training stations and centers.

Despite careful consideration and expert study at the time of induction, it is inevitable that many psychiatric misfits will slip through. With accelerated induction schedules it is understandable that draft boards cannot make thorough psychiatric and social service studies.

As a result, histories become objects of suspicion, and unbiased evaluation of cases exceedingly difficult without further study. The Navy is fortunate in having the assistance of the American Red Cross to supply information concerning recruits from even the tiniest hamlet in the remotest corner of our country.

Organization of Units

The Neuro-Psychiatric Examining Unit at the Great Lakes Naval Training Center is composed of two integral divisions — a primary screening section for routine interview, and a psychiatric observation section. It is the function of this unit to estimate mental disabilities in recruits and to exclude those, apparently sound men, who may break down

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under training or combat conditions.

The first division operates in the Receiving Building where recruits are initially received. They arrive at all hours of the day or night and within a few hours of arrival a routine dental check, complete medical and laboratory examinations, and a brief neuropsychiatric interview will have been completed. Many men have undergone long and arduous train rides, and their condition is not conducive to best performance when interviewed. The interview is brief, lasting only a few minutes, but at least an evaluation can be made. Table 1 illustrates the type of questions asked.

An "examining team" consists of two or three psychiatrists and two psychologists all using the same routine for examining in order to have comparable reports. Cross consultations are had whenever necessary. Hospital corpsmen, trained in standard psychometric tests, are present to give "emergency Kents" whenever a rapid psychometric evaluation is required. A complete neurological examination is done if indicated, for example in the presence of atrophies, dystrophies, nystagmus, Argyll-Robertson pupils, tremors or vasomotor instability. Later the questionaire (Table 1) is closely scrutinized and the recruits answers may reveal evidence of psychopathy. Sometimes an obvious neuropsychiatric entity such as general paresis will be recognized, the individual having come through a station lacking a skilled neuropsychiatrist. Of course, a final decision cannot be made in so short a time as is expended at the initial interview, especially in a field where a history is so important, and where a mistake in screening may cost the government so much later. In many cases, social histories are necessary to clear up certain doubts. Men who appear fit for duty, but who require confirmation on points of history such as hospital records or criminal records, are sent directly to training pending receipt of social histories. It is not the primary purpose of the initial psychiatric interview to reach a decision or a diagnosis, but simply to determine whether a detailed examination is required. All doubtful cases are referred to the psychiatric building for further study. There they may remain until Social Service obtains confirmation—whether that requires one day or a month. Many unfit recruits are discovered at this initial interview.

Men who are "screened" from the line, together with those referred from other sources are sent to the Neuro-Psychiatric Unit. We try wherever possible to interview and to examine the man within twenty-four hours. Occasionally, under the stress of excessive work, men must remain in the Unit for two or three days before being examined. At least two and often more examiners see an individual. They may be psychiatrists or psychologists or a combination of the two. If there is agreement among the examiners that the man is fit for duty, he is immediately returned to training. If he is a recruit, he rejoins his original company or a new one. If both psychiatrists or psychologists concur that a case is psychiatrically or psychometrically unfit, the man is presented to the Aptitude Board for disposition. Divided opinions occur constantly and in these cases additional information is required which is obtained through the Red Cross.

This agency is housed in the Neuro-Psychiatric Unit and consists of a staff of highly trained social workers and administrative workers. They skillfully interview a problem case that is screened from the "line" or returned from his company for the purpose of defining the problem which is to be investigated. Another important phase of the Red Cross work, is service to the men being discharged. An effort is made to see all who are returned home, especially those:

(1) Interested in knowing "why" they are being discharged.

(2) Presenting conditions where medical consultation is indicated, as in cases of migraine, epilepsy, organic brain diseases.

(3) Presenting a problem of emotional and physical immaturity, including nostalgia and delayed sex interest.

(4) Presenting enough anxiety to indicate interest in psychiatric consultation after discharge.

(5) Incapable of traveling without supervision, such as mental defectives.

(6) Incapable of understanding their discharge or taking the initiative in arranging for treatment which may be indicated to prevent further disintegration of the personality such as schizoid personalities, etc.

(7) Presenting latent and overt sexual deviations.

(8) Presenting psychosomatic symptoms where there is need to plan for psychiatric consultation and treatment.

Owing to staff limitation, everybody cannot be seen and therefore, the basis of selection is their need for assistance, depending upon the type of problem presented and its treatability in the light of available medical facilities. The disturbed cases are seen frequently in repeated interviews during the time they are awaiting discharge.

The discharge interview by the psychiatric social worker is a diagnostic and treatment process. An interpretation of the findings causing the discharge is explained in order to help him gain some insight into his condition. This affords an opportunity to suggest private or clinical medical and psychiatric care in his community. In addition, reassurance is offered to those who are greatly disturbed by their brief military experience. Plans are discussed for his return to the community, living arrangements, family problems, and his employment. If indicated, service is offered to convey to the physician of the local draft board pertinent information regarding the reason for his discharge.

The Aptitude Board which recommends final disposition of unfit candidates consists of one regular naval medical officer, one officer of the line, two psychiatrists, and one psychologist. A Red Cross Field Director usually attends to take care of social service problems for after care, future draft board contacts, employment, etc. The subject may have a personal hearing if he desires or if deemed necessary by the Board. He is always informed of the Board's decision or recommendations.

An important part of the examination at the Neuro-Psychiatric Unit is the new use of Trial Duty. This is employed in almost all cases returned to duty after the first investigation. These men are returned to their regular units, or to a new company if a change in shipmates or commanding officer is considered wise. The Company Commander is requested to take special note of the adjustment under actual conditions of service. After three weeks, these men are called in for another interview accompanied by a report from their commander. Table 2 is a copy of the type of report requested. This often serves to clear up doubtful cases because it may take only a few weeks of service to bring out or accentuate a neuropsychiatric difficulty or to erase and completely eradicate some situational problem.

The principal causes for rejection in the Neuro-Psychiatric Unit are in order of their frequency: 1. Constitutional Psychopathic State; 2. Psychoneuroses (all types); 3. Mental deficiency; 4. Enuresis; 5. Post-Traumatic Syndrome; 6. Migraine; 7. Somnambulism; 8. Convulsive Disorders; 9. Illiteracy; 10. Neurological Disorders; 11. Alcoholism; 12. Immaturity; 13. History of Psychosis.

The rare appearance of other entities does not entitle them to detailed discussion. No rigid standards can be laid down as to when these conditions are severe enough to warrant rejection. The most reliable guide is the clinical training of the neuropsychiatrist and the experience in the re-examination of men after a period of trial duty. Members of the Unit are usually able to predict accurately which of the men will break down during training. On the whole, it is gratifying to see how few mistakes are made.

Tables 3 and 4 list the Navy nomenclature used on survey. Statistics of the disorders encountered cannot be presented at this time, as a matter of Naval policy. The following groups, however, represent the principal types encountered.

Constitutional Psychopathic State

This condition accounts for the largest number of discharges. Following official Navy nomenclature, this group is further subdivided into sub-groups: (a) Inadequate Personalities, (b) Emotional Instabilities, (c) Schizoid Personalities, (d) Sexual Psycopaths, (e) Criminalism, and (f) Paranoid Personality.

A true psychopathic personality is one who appears normal on the surface, but has a deep seated abnormality causing him to be an inveterate trouble maker. We quote a definition of this disorder from the Surgeon General of the United States Army. "Under this heading is placed an ill defined, more or less heterogeneous group of conditions in which the patients, although they do not suffer from congenital defect in the intellectual sphere, manifest a definite defect in their ability to profit by experience. They are unable to respond in an adult social manner to the demands of

honesty, truthfulness, decency and consideration of their associates; they are emotionally unstable and not to be depended on; they act impulsively with poor judgment; they are always in conflict with the law. They do not take kindly to strict discipline. Such persons have a decided influence on their associates, and on the morale of the organization, for they will not conform to recognized authority and they derive much satisfaction from cultivating insubordination in others. Frequently, they make a favorable impression, are neat, talk well, and are well mannered. In this general group are to be placed many homosexual persons, grotesque and pathological liars, vagabonds, inadequate personalities, petty offenders, swindlers, kleptomaniacs, alcoholic persons and likewise those highly unstable and arrogant persons called pseudoquerulents ("guardhouse lawyers") who are forever critical of authority and imbued with a feeling of abuse and lack of consideration of their fellows."

Early in the history of the Unit, the psychiatrists were encountering many cases of those coming into the Navy through the efforts of well meaning but shortsighted judges before whom these psychopaths would appear charged with some crime. The well-meaning but poorly informed judge would rule "I will suspend sentence if you will enter the Armer Services." We would acquire another troublemaker. This practice was discouraged but it took time to educate the judiciary.

The psychopath is usually a person physically healthy and rather intelligent. The psychiatrist soon identifies in these individuals the chronic misbehavers, whose history will reveal that since childhood they have been in trouble; at home, in school, at work, and have apeared in courts frequently. They are most skillful in offering excuses, and may be so deft and glib that they can talk themselves out of any trouble. When they are discharged from the Navy, those that know them remark that those chronic offenders have been too sharp for the psychiatrist, and have once more evaded their responsibilities. Their rejection often arouses resentment in their company commander and the public but they require more attention than their own contribution can possibly justify and we believe the service is better off without them. If these psychopaths not discharged early, they will commit repeated offenses.

Among the Constitutional Psychopathic States, the most common one is Inadequate Personality which accounts for over a quarter of all rejections. These individuals usually are of normal or even better than average intelligence, but have made a poor home, school, work, and social adjustment. Their inadequacy is often revealed at the initial interview because of the inferior quality of their responses. If sent to duty, these men are soon returned with reports of unreliability, poor aptitude and inability to serve. There are stereotyped symptoms—headaches, dizzy spells, fainting spells, backache, leg ache etc. In the barracks it is immediately noted that the psychopath never acclimates himself to military life. He resents everything and everyone. He obeys orders grudgingly or will not do so at all; he is stubborn, indifferent and complains that he is disliked by others about him, and that his superiors are always giving him the most work to do. He is the type of individual usually brought to disciplinary action for infractions of the rules—yet he does not change; he offends over and over.

The Emotionally Unstable Psychopath is dull, flat, sometimes retarded, but often intelligent. He is flushed, sweaty, tremulous, restless at the interview, and not too responsive. He will burst into unprovoked tears during an interview and yet a few minutes later outside the office may be gay, laughing and joking.

The Schizoid Personality is a seclusive individual—a "lone wolf." He is asocial, will mix with few, and is usually suspicious of his shipmates. He does not try to make friends, but tends to day dream and spend his time in training away from his shipmates. He broods over any chance remark about him that may be made in the barracks. This trait may make its appearance in later stages of service. This individual is dangerous, and if not discovered early and dealt with properly, will become worse. Not infrequently, a schizoid personality may become a schizophrenic.

The Sexual Psychopath is gradually becoming more and more numerous. Abnormalities have been discovered in white and colored individuals. Occasionally, an offender will seek an interview with a doctor or a chaplain and divulge his problem. Sometimes he is apprehended while carrying on his practices at the

Center, ashore, at private homes, hotels, or at the YMCA. Now and then the subject of attention or affection will report the aggressor and in the ensuing interview many men are implicated. Through this means several rings of offenders have been discovered.

Criminalism is usually limited, as has already been stated, to petty thievery, gambling and other profit-making schemes. The numbers fortunately are small, at least at this Training Center.

The Paranoid Personality is the usual type seen in civil practice. Their number is few, Many have schizophrenic coloring.

Psychoneuroses

In this group, are found men with physical and mental symptoms of psychogenic origin. The decision to be made is whether or not the condition is so severe as to warrant rejection. If the man's symptoms have not prevented him from working regularly and maintaining a normal family, social and occupational routine, he is rarely discharged. An attempt is made to give the individual insight into his condition. The psychoneurotic usually unconsciously converts his anxiety into physical symptoms. These symptoms in the autonomic sphere are familiar—flushing, sweating, tremor, dermatographia, the so-called "irritable" or "soldier's heart" or "effort syndrome," stomach difficulties, dyspepsia, diarrhea, and urinary frequencies. The neurotic cannot overcome his nervousness no matter how hard he tries—if he is honest. The more he attempts to control himself, the worse he usually becomes, and he regularly visits dispensaries asking for the cause of his "nervousness." We encounter cases of the so-called conversion hysteria, hysterical paralyses, motor and sensory defects. If these complaints are such that a definite physical cause cannot be found, an attempt is made to ferret out the etiology elsewhere. If handled properly and wisely the individual may be saved for useful service.

Enuresis

This condition is astonishingly common and may exist in a recruit of 17 or in older officers. Since the symptoms of enuresis are so easily simulated, histories must be independently confirmed. Here again the Red Cross renders able assistance; confirmation from the family, room-mates, close friends, is obtained. Many recruits use bed wetting as an expedient for discharge from the Navy. When willfulness of purpose is discovered, commensurate punishment is meted out. However, anyone who will simulate enuresis is not good for the Service anyway. Many of these boys will be admitted to dispensaries where physicians attempt to break the pattern with numerous but usually unsuccessful forms of therapy. Practically all cases are eventually discharged.

Post Traumatic Syndrome

This condition, in which there is usually intractable headaches, dizzy spells, syncope, and some neurological abnormalities, usually follows a severe head injury. At times it is impossible to distinguish between organic and neurotic headaches. If severe symptoms such as incapacitating headaches, severe dizziness, or syncops occur, if the symptoms have interferred with the man's employment or social life, or if there are definite personality changes, he is discharged. Roentgen studies are routine but actually only a few cases are decided on this evidence. Sometimes a complaint of an ancient skull injury is presented by the patient for the purpose of being surveyed.

Migraine

Migraine, and conditions simulating it, are encountered constantly. Typical and atypical pictures with proper evaluation and social service workup usually result in the patient's rejection. Rarely is one seen during an actual attack.

Somnambulism

This pathological state must be looked on more seriously in the Navy than in any other branch of the Service. Now and then a case of a seaman walking over the side of a ship is reported. A boy may be confined to this Unit awaiting confirmation of this complaint and one night may injure himself sleepwalking. There are cases of men walking through doors, windows, falling from second deck porches, walking while asleep into a road and being struck by a vehicle. Guards have challenged somnambulists, and at times have almost shot the unfortunate person who could not answer a command. A person with an ancient sleepwalking episode is usually sent to

trial duty. Some may display their difficulty even in so short a period as three weeks. Rarely is a condition of somnambulism wilfully simulated.

Convulsive Seizures

A recruit will often conceal the presence of a convulsive state either because of shame, superstition or a great desire to remain in Service. A history, epileptic stigmata, or testimony of competent witnesses is usually sufficient to establish the diagnosis. In doubtful cases, electroencephalographic studies are utilized.

Neurological Disorders

Most neurological cases are recognized and rejected at induction stations. However, we do run across instances of Parkinson syndrome, peripheral nerve injuries, an occasional early or incipient brain or cord neoplasm, cerebrospinal manifestations of syphilis, early manifestations of the myopathies, dystrophies, choreas, muscular atrophies, neurological manifestations of vitamin deficiencies, residual paralysis due to birth injuries, and various others.

Alcoholism

We do not see many alcoholics. However many recruits are received fresh from farewell drinking bouts and sometimes this is sufficient to ignite a chronic alcoholism into impending hallucinosis or delirum tremens. The history of drinking plus the usual stigmata of chronic inebriation makes the diagnosis simple. An alcoholic is a serious problem in any branch of the Service. He is unreliable, his work in the barracks and performance on the drill field poor. He cannot respond under pressure. The alcoholic lies and regularly goes "over the hill." Withdrawal symptoms of an alcoholic are seen now and then. He is a constant discipline problem especially when on liberty, for then he resumes his set pattern.

Immaturity

The Navy is notorious for receiving immature young boys anywhere from 12 years up. Some have the physical development of a 21 year old, but the mental and emotional capacity of their real age. Occasionally a boy of 14 or 15 will make the best grades and adjustment in his company. The true age is eventually learned by quizzing, by confession, by recognized childish behavior, parent's letters, or by fingerprint check which is usually made with records of boys school, reformatories, correction homes, and other institutions. These young boys are sent home upon verification of the true age. Quite often we lose good material in spite of age.

History of Psychosis

We rarely encounter a true case of psychosis. Such a condition is obvious and is usually detected at the initial interview or soon after the beginning of recruit training. Occasionally a true case of psychosis may occur in an officer. All cases are hospitalized immediately and many are eventually sent to Bethesda or to St. Elizabeth's Hospital for continued care.

Discipline Division

The Neuro-Psychiatric Unit is often called upon to advise the Comanding Officer or the Discipline Office as to the handling of prisoners. This function is directly related to the disposition of the men confined to the Brig. This function of the Unit is intimately related to that of the Discipline Division of the Training Center. For the sake of clarity and ease in presentation, we will deal first with the psychiatric and psychological functions performed in the Brig of Admission and then with a more detailed study of those Brig cases referred by the Office of Discipline to the Neuro-Psychiatric Unit. Every Naval prisoner, whether he is a sailor, a "Seabee," a coast guardsman, or a marine and regardless of the station from which he has come (within the 9th Naval District), is given a series of routine examinations upon the day of his arrival at the Brig of Admission. They consist of: (1) A physical and medical examination; (2) A psychological examination and interview; (3) A "sociological" discussion; and (4) A psychiatric consultation.

First, each man is required to fill out a detailed personal questionaire and answer every one of the sixty items. From the answers the essential facts of the man's civilian and military life can be gleaned. The men are enjoined to be specific. For instance an answer that his religion is "Protestant" would not be acceptable. He is instructed to name the faith in which he was baptized, or the church which

he attends. An accurate answer may be revealing both from the psychiatric and the psychological point of view. We find much agreement between this questionaire and social service reports on the individual. From this sheet we have available immediately detailed data on (1) Marital status and adjustment. (2) Home and family conditions including health and adjustment as well as indicia of socio-economic level. (3) The educational record which elicits information as to truancy, expulsions, grades completed, and standing in the class. (4) Civilian work record—number as well as types of jobs held and duration of each. (5) Police records and juvenile court history. (6) Previous military experience including C.C.C. and Boy Scouts; (7) All facts pertaining to naval service thus far—"boot" training, service ashore and afloat, participation in battle action etc. (8) Naval offenses, past and present, in detail. (9) Finally, the opportunity is given each man to add any pertinent information he may wish. It is noteworthy that nearly every man takes advantage of this and offers explanations for his present or past naval offenses. This record is called the social data sheet. After careful study by the psychologist and psychiatrist, it is turned over to the Chaplain in the Brig of Admission.

Second, each man is given a detailed preliminary interview by specially trained hospital corpsmen. They prepare a clinical history incorporating disease history, present state of health, medical findings, and pertinent service data which they record in an appropriate folder for permanent filing and ready reference. This clinical history becomes the basis for the integration of all data relative to the man in question.

Third, the clinical folder and men are then routed to the Brig psychologist who administers an appropriate form of the Kent EGY psychometric examination. This score, in IQ values, is interpreted in accordance with the social data sheet and the man's clinical history. Thus, feeblemindedness, for instance, is not diagnosed only upon the basis of scores made on the psychometric test. The psychologist frequently encounters behavior patterns that are obviously not typical of the average rank and file. In one instance bizarre answers on the Kent test facilitated discovery of a schizophrenic. In another, a sailor charged with desertion exhibited a recurrence of an acute psychotic episode. War neuroses cases also are often identified during this period of study. At the conclusion of the psychometric examination and subsequent interview, the psychologist writes a brief report in the clinical history. This covers psychological data and his findings.

Fourth, the man, his clinical folder and social data sheet are examined by the psychiatrist. He co-ordinates the data after he has examined the man. He then decides the disposition of the prisoner. The following courses are open to the psychiatrist:

(1) Recommend action by the Discipline Officer.

(2) Recommend that the prisoner be sent to the hospital either as a medical or psychiatric case for observation and treatment.

(3) Recommend that the man be "held over" for further study by the staff in the Brig prior to arriving at a final decision.

(4) Recommend that the prisoner be sent to the Neuro-Psychiatric Unit of the Training Center for further study.

We find then that prisoners may be sent to the Neuro-Psychiatric Unit, either directly from the brig with the approval of the Discipline Officer, or by Discipline with a request for examination and recommendations. Thus numerous men admitted to the brig, are referred directly or indirectly to the Neuro-Psychiatric Unit.

It is recognized that more study could profitably be given to many cases in the Admission Brig, but lack of time and competent personnel does not permit this. The information, presently available, however, is usually sufficient to facilitate intelligent disposition of the men admitted to the Naval prison.

It is generally found that (1) Most offenders are in the "borderline group" that draft boards, induction centers, and psychiatric examiners in the Navy "passed with qualms and misgivings," and (2) Many of the Brig admissions are emotionally immature, or emotionally unstable, or inadequate personalities. They more often than not come from bad home surroundings, have an education under the 8th grade, have IQ's between 70 and 90 with the average in the low 80's. Many have police or juvenile court records. They are re-

sistant to discipline because they have never before encountered it.

After routine medical work-up and psychological testing, the prisoner, on whom a further psychiatric opinion is requested, is brought under guard to the Neuro-Psychiatric Unit. He is examined by two or more psychiatrists and, if indicated, further evaluation from the psychometric standpoint is made. The concurrence of at least two psychiatrists is necessary for a recommendation.

The types of cases run the gamut of psychiatric entities—from psychopathic personality series, and psychoneuroses to frank psychoses.

After examination and classification a recommendation of one of four means of disposition is made:

(1) The prisoner who is considered likely to adjust in the future, may be sent back for routine disciplinary action followed by restoration to duty.

(2) The "repeater" and "chronic behavior problem" (which are both clear cut psycopathic states) are sent back for routine disciplinary action followed by discharge in keeping with their records.

(3) The individual who is mentally sick, but is considered able to be discharged into his own custody, is sent before a Board of Medical Survey for a Medical Discharge.

(4) The psychotic prisoner and the borderline state of emotional instability is treated, as mentioned before, as an emergency problem and is sent immediately to the Naval Hospital for treatment and disposition.

The discipline problem from the standpoint of the Neuro-Psychiatric Unit is two-fold. (1) To prevent the incarceration or punishment of a mentally sick or incompetent person, and to recommend appropriate handling of these cases; (2) To separate the remaining cases into two main groups; (a) Those who are likely to be repeated offenders; (b) those who will learn by their mistakes and punishment, and will be able to adjust in Service and be an asset.

War Neuroses

During the last few months the Neuro-Psychiatric Unit has been called upon to make specific recommendations for discipline cases in which the men have had considerable service, and, for the most part, have participated in strenuous combat. Many such men have been assigned to temporary duty at this base. As would be expected, with the war in its third year, there is an influx of men who entered the Service at the onset of hostilities. Furthermore, with the heightening intensity of naval campaigns an increase in the number of cases of so-called "War Neurosis" has developed. Accordingly, the various Naval Training Stations in the country, together with Naval Hospitals everywhere, are being geared to meet, and properly handle those emergencies. To this end, at the Great Lakes, machinery has been set in motion to deal with the problem.

A Medical Survey Board of three psychiatrists sits in special session on each case. At a meeting called for the purpose, each record is reviewed in detail, the Board being aided in its final decision by observing the man and by the information accompanying the case. His health record, service record, social service report, and the Brig Psychiatrist report are studied carefully in detail. The man is given an opportunity to speak in his behalf, and, answers questions of Board members. He is then dismissed temporarily and his case discussed and a final decision reached. Before arriving at a decision the members of the Board must determine whether the condition existed prior to entry into the Naval Service and if so, what effect military service had upon the man—whether military service aggravated the condition.

The man is returned to the Board room and informed of the decision, and given an opportunity to make a statement in his own behalf. If he does not wish to do so the hearing is terminated and the individual sent back to the Discipline Office for routine disciplinary handling.

Health Record

The medical, surgical and venereal disease entries of the health record are always carefully studied. Certain medical diseases may have a bearing upon the neuro-psychiatric disorder. For example, a venereal history may involve the central nervous system and may also reveal the subject's promiscuity and give a hint of the individual's lack of judgment. He has, very likely, failed to avail himself of prophylaxis. Entries of a surgical nature,

especially those of traumatic origin are significant. Head injury stands high in importance—both from the standpoint of brain damage, and also in the localization of symptoms in the neurotic or the psychopathic. Complete clinical and laboratory studies are contained in the health record when necessary. When diagnosis is uncertain the health record has hospitalization entries of the special diagnostic procedures used to establish organic or non-organic nature.

There are individuals who either are ill repeatedly, or are constant accident victims. Whether one believes that these illnesses or injuries result from an unconscious death wish, clumsiness, or stupidity, the fact of their multiplicity and probable continuance is weighty in consideration of the trauma and after effects.

Service Records

The Board is acutely interested in the individual's performane of duty and his conduct. The Service Record presents that data: (1) His service marks or grades (2) Advance in rating and speed of promotion (3) Various assignments, land and sea, and duration of service (4) Entries of commendations, citations (5) Naval offenses, their severity, frequency, and relationship to actual combat.

Brig Psychiatrist's Record

The men referred through the Discipline Division have all spent varying periods of confinement in the Brig before coming to the Medical Survey Board. During this confinement both psychiatric and psychometric studies are made by the Brig administrative personnel, the psychiatrist, psychologist, internist, and medical corpsmen, who have been trained to make psychometric evaluations. A routine psychometric study is made in an attempt to correlate the intellectual and neurotic patterns. That record goes to the Board.

Constitutional Psychopathic State (War Neuroses Group)

The largest number of cases appearing before the Medical Survey Board are those in the Constitutional Psychopathic category. Of all psychiatric cases seen over a period of time, 64.5% were of the Constitutional Psychopothic State and sub-grouped as: Emotional Instability 50%, Inadequate Personality 10.4% and Schizoid Personality 4.1%.

In general most men in the War Neurosis group had made an adequate social adjustment prior to entering the Navy as evidenced in social service reports, histories given by the individual, and by the psychiatric examination itself. There was no maladjustment in childhood, in school, at work, or in the social sphere. All reports were indicative of stability. However the very fact that a man is AWOL is suggestive of psychopathy.

Every case in the War Neurosis group had been on lengthy combat duty, and most of the men had been at sea for long periods. None had been through less than two major engagements and some had been through as many as ten major battles. Nearly a third had had ships torpedoed under them, or, were aboard craft severely damaged in battle. Many had been in the water for a long time before being rescued. There was, however, no direct comparison between the severity of the neurotic reaction and the intensity of the combat experience. Some men who went through the most severe combat experience revealed fewer symptoms than those who saw little action.

The clinical picture of this group is characteristic. The men appear tense, anxious, ill at ease, and frequently depressed. There are varying degrees of tremor of the head, lips and fingers. The history elicited from them is typical: Following combat experience, they experienced insomnia, and any sleep was beset with troubled dreams and nightmares—dreams of bombings, ship sinkings, the sight of their buddies being killed, and similar memories. The startled reaction in nearly every member of this group to even the slightest unexpected noise was general.

The men were ill at ease when relating their experiences, and were reluctant to repeat these accounts. Frequently, marked emotion and even feelings of guilt were exhibited during the interview.

In considering the men in the War Neurosis group the following facts are given great weight: (1.) Actual combat experience. (2.) Number and severity of engagements. (3.) Damage to the ship. (4.) Personal injury. (5.) Morbidity and general emotional reaction to his shipmates. (6) Type of combat to which subjected, i. e., aerial attack, submarine and torpedo attack, depth bombing, gunfire, or hand-to-hand conflict. (7.) Personal fatigue, loss of sleep, anorexia.

Recommendations

If no disease is found, the Survey is terminated, and the man is returned to duty or his former disciplinary status. When the diagnosis is established one of three recommendations may be made by the Medical Survey Board:

(1) Unfit for future service in the United States Navy in any capacity, and discharge recommended. His case is either clearly psychopathic, or a severe War Neurosis.

(2) Fit for shore duty only, which, however, does not imply his remaining within the continental limits of the United States. These cases are fundamentally good men who have developed a mild or circumscribed neurosis and are unstable, and not sufficiently integrated to function under battle conditions.

(3) A six months period of shore duty, where he will act in duties commensurate with his rating. These men may adjust and become ready for future active service.

Approximately two-thirds of the men in the War Neurosis group were recommended for shore duty, either permanent or temporary, and the other third was discharged. Whenever it was deemed necessary, these limited duty cases were given psychotherapy in the hope of hastening their adjustment, recovery and return to full duty. While therapy has been successful in some, it was far from satisfactory in others because the best period for treatment had passed. By the time these cases reached the Board months had elapsed since the onset of neurotic symptoms. In fact, in no case were complaints less than two to three months old, and in many instances up to eight months. About 40% of cases which promised rehabilitation were accepted for psychotherapy. About one third of these improved to the extent that they were retained for shore duty, but none to date could be considered sufficiently recovered to return to full duty.

Psychological Division

The psychological services in conjunction with the neuropsychiatric program are concerned mainly with the detection of those recruits whose adjustment to Naval routine is unlikely due to intellectual subnormality. In determining approximate intellectual levels two tests have proven of value. The Kent Oral Emergency Test, which can be administered in from eight to ten minutes, is used in preliminary screening, and recruits receiving low scores on this examination are retested with the more exact Bellevue-Wechsler Adult Intelligence Scale. In spite of its brevity, the Kent test compares favorably with more detailed tests of general inteligence and its use in preliminary screening is justified.

The intelligence quotient is not relied upon exclusively to determine whether a recruit is intellectually capable of making a service adjustment. His social history, occupational record, and progress in school are among the many other factors considered. Since the Great Lakes Naval Training Center draws men from every section of the United States, it is necessary to weigh carefully the effects of environmental and cultural backgrounds on the individual's performance on standardized psychometric tests. Diagnosis of mental deficiency is made only after careful testing and consideration of the individual's history.

It has been found that the psychometric procedures not only give an index of the subject's intellectual development, but also that a qualitative analysis of the test, together with an evaluation of the quality of his responses, will yield pertinent data with regard to existing personality disturbances. Bizarre and typical responses may identify the constitutional psychopath; neurotic preoccupation is quite noticeable to the experienced examiner; deviations of attention, blocking, and lack of mental flexibility often point to the schizophrenic personality. In this aspect the psychologist is extremely cautious in his interpretation of the intelligence quotient, since many low IQ's are traceable to personality anomalies which affect adversely the man's performance, rather than to intellectual lack.

Although illiteracy is no longer a prohibitive factor in acceptance for the Navy, psychological examinations still include tests of reading and writing, since they, as well as the psychometric examination, afford valuable clues as to the individual's personality make-up. While complete illiteracy in itself is no criterion of feeblemindedness, it has been found that the vast majority of illiterates are of subnormal intelligence, the average IQ falling below the normal borderline level of IQ 70-80.

With regard to those illiterates of adequate intellectual endowment who have had the cultural opportunities to learn to read and write, it is frequently found that personality disturbances of a constitutional type (inadequacy in particular) are explanatory factors.

Experience has demonstrated that the mentally deficient individual is a military liability. Even though the high grade defective may be able to adjust to circumscribed detail, he cannot be used in the Navy because there is no classification of limited service for neuropsychiatric disabilities not service connected. Therefore, every man accepted in the Naval Service must be fit for general duty and is expected, within limits to compete on equal terms with his shipmates. The feebleminded person cannot employ reason and judgment in critical situations and his rejection is therefore imperative. Even in regard to such routine as is taught during "Boot Training," the defective finds learning so difficult that he frequently proves a drag on the company as a whole.

The matter of personal responsibility is also an important consideration in connection with the feebleminded recruit. Should a defective be involved in disciplinary action, it would be necessary to establish his mental competence and personal responsibility. Since, in civilian life allowance is made for the feebleminded person's shortcomings, it is probable that such a point of view would through necessity be adopted in military matters. The same applies to the total illiterate. While some illiterates do possess adequate intelligence, their inability to read might result in the disobedience of orders because of failure to comprehend written instructions and directions.

No attempt is made to conduct psychological examinations independent of psychiatric considerations, since it has been found that articulation between psychological and psychiatric functions is essential in arriving at the individual's mental fitness for military service. Cross references of cases among psychiatrists and psychologists is routine, and rarely are differences of opinion found which would affect the ultimate decision. Psychiatric and psychologic findings combined produce a better all-round picture of the individual than either examination alone.

Conclusions

Standards for accepting men into the Navy tend to vary according to the average quality of recruit received. This is in direct relation to the demand of the manpower situation at any specified time. During the past year more border-line cases were accepted because first class recruits had diminished. Draft boards were scraping the barrel bottoms and were sending along prematurely aged men, men previously rejected, and family men with many dependents. Recently, the standards were elevated on the strength of neuropsychiatric cases returned from battle areas. While it can be predicted whether a man will survive recruit training, it is more difficult to foretell what may happen to him under actual battle conditions.

Benefiting from the experience and information derived from our work at the draft boards, induction stations, and at the bases, there is much for us to consider and more to do. Most inductees have never consulted a physician nor have they been seen in clinics or by social service workers. Tabulation of statistics will yield valuable information on nervous and mental disorders in a wide cross section of the male population. Unlimited material is available for research into causes and mechanisms of these disorders. This data flaunts a challenge. What are we going to do about this problem? What can be accomplished with those who have been rejected or surveyed? Treatment on a large scale is impossible within the military organizations because there is not the personnel, the means, and the time right now to undertake so tremendous an assignment. This must all wait until the end of the war when it can be handlel under a well organized program. A promising beginning has been made, however, in the form of research and treatment programs already started by several states for the returned soldiers, sailors, and marines. State hospitals, commercial and industrial organizations have already had considerable experience with selected small groups of mental casualties. There will be more and more returned to tax the facilities of these institutions when the tempo of war is stepped up. We are receiving gratifying replies from hospitals, institutions, rest homes, clinics and pri-

vate doctors to whom our casualties were sent through the medium of the Red Cross.

Authors' Note: The opinions and assertions contained in this paper are those of the writers and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service at large.

TABLE I: QUESTIONAIRE

1. FULL NAME Single or Married? First Marriage? How long? Children? Divorced? Separated—Why?
2. SCHOOLING How far? Set backs? Ungraded classes? Special or opportunity classes? Good at playing hookey? Fight or argue with teachers? Expelled?
3. HOW DO YOU FEEL? Stomach complaints? Special diets? Take medicine? Bowels? Appetite? Any foods affect you—allergy? Bowel habits? Sleep well? Medicine for sleep? Dream much—type? Unstable? Nervous? Medicine at night? Feeling smothered or suffocated? Aches and pains anywhere? Lose or gain weight? Tire easily? Fatigue in mornings?
4. WORRY ABOUT ANYTHING? Health? Finances? Family? Romance? Do you get the "blues"? Depressed or elated? Moodswings? Do you fear crowds? Can you sit in movies? Bite nails? Fear high places?
5. EVER BEEN TO A DOCTOR OR TO A SANITARIUM? Nervous or mental disease in your family? Anyone in family have "nervous breakdown"?
6. HEADACHES? How often? Kind? When do they occur? "Sick ones"? Nausea or vomit? Blurred vision? Incapacitating? Hereditary? Treatment?
7. HEAD INJURIES? Auto? Struck? Unconscious? Coma? Sequellae? Residuae?
8. CONVULSIONS? Faint? Fits? Bite tongue? Soil self? Joints hurt after attacks or in the morning upon arising? Family history of epilepsy? Tinnitus? Paresthesias?
9. FAINTING SPELLS? Sight of blood? Or Accidents? Or when picked with needles? "Falling out"? "Blind staggers"? "Blackouts"?
10. CAR SICK? Air sick? Sea sick? Train sick?
11. WALK IN SLEEP? Out of room or house? Fall or injure self during spells?
12. WET THE BED? How long? Soak mattress? Treatment? Last session?
13. GET ALONG WITH PEOPLE? Make friends easily? People like you? Associate with many? Who dislikes you? Prefer to be alone? Are you leader or are you dependent? People mistreat you or criticize you? Talk about you? Shun you?
14. PRESENT JOB How long have you had it? Job History? Kinds? Number? Reasons for leaving? Get along with boss? Ever fired?
15. GET ALONG WITH GIRLS Have a sweetheart? Dates?
16. SEX HISTORY Age at first intercourse? Venereal diseases? Perversions?
17. SPORTS HOBBIES Excel? Join in them? Read much? Like to be alone in pursuits?
18. TRAVEL: Much? Nomadic? Miss home? Miss folks? Stay away from home much?
19. EVER IN SERVICE: Discharged from Service? Kind of discharge? Ever in CCC? Merchant Marine? What do you think of entering Service?
20. DRAFT STATUS: Ever 4-F? Why?
21. HOW DO YOU FEEL ABOUT ENTERING SERVICE? Knowledge of Current Events?
22. PREFER ARMY? NAVY OR MARINES? Prefer no Service? Can you obey orders? What do you think of entering Service?
23. WORST JAM YOU WERE IN? In neighborhood? With cops? Number of arrests? Suspicion? Terms served? Parole? Probation?
24. DRINK? How often drunk? Last time? How much does it take? Periodic or spree drinker?
25. HALLUCINATIONS OR DELUSIONS? People talk about you? People look at you peculiarly?
26. RELIGION? Fanatic? Devout? See or hear God?
27. REASONS YOU SHOULD NOT BE IN SERVICE:

TABLE 2: TRIAL DUTY REPORT

Date.....

From: Officer in Charge, NP Unit.
To: Company Commander of Company No.....
Subject: .....

1. Subject man has been under observation in this Unit. He has been sent to your company for a period of trial duty, and is to be recalled for an interview on or about.....

2. IT IS REQUESTED THAT SPECIAL NOTE BE TAKEN OF THIS MAN'S adjustment to Navy life and routine, and that at the time of his reexamination, this questionaire be returned *with the man.* This information is important to examiner as it gives the only data available for determining subject's aptitude for service.

THESE QUESTIONS ARE NOT TO BE ANSERED BY ANY ONE OTHER THAN THE COMPANY COMANDER
Officer in Charge, NP Unit.

Is he Reliable?.....
Sad .....
A "Lone Wolf"? .....
Friendly? .....
Moody? .....
Obedient? .....
Homesick? .....
A "bed wetter"? .....
Overboisterous? .....
Does he complain? .....
What is his nickname? .....
Does he walk in his sleep? .....
Any faints or fits? .....
Do his shipmates tease him? .....
Does he learn normally? .....
Does he go to sick bay often? .....
Is he PECULIAR in any way?.....
In what way? .....
.....
.....
Does he appear to like the Navy?.....
Other remarks or information of interest.....
.....
Extra duty? .....
For what? .....
What is your opinion of this man's aptitude for Naval Service:
VERY POOR POOR AVERAGE GOOD EXCELLENT
DO YOU WISH HIM TO REMAIN IN YOUR COMPANY? .....
Signature of Company Commander:
.....
Date.....

TABLE 3: DESCRIPTIVE NOMENCLATURE

ABSCESS, BRAIN
ANOSMIA
APHASIA
ATAXIA, HEREDITARY (Friedreich's Disease)
ATHETOSIS
AVIATOR'S SICKNESS OR BALLOON SICKNESS (Report as Hypobaropathy)
CATALEPSY
CEREBROSPINAL SYPHILIS, UNDIFFERENTIATED (With symptoms and/or + signs, but

not differentiated as to type. Not to include Tabes Dorsalis or Dementia Paralytica)
CHOREA, PROGRESSIVE, CHRONIC HUNTINGTON'S
CHORIOMENINGITIS, Benign, Lymphocytic
DYSTROPHY, PROGRESSIVE, MUSCULAR
EFFORT SYNDROME
EFFORT SYNDROME, AVIATOR
ENCEPHALITIS, ACUTE (Not to include Encephalitis, Lethargic)
ENCEPHALITIS, CHRONIC
EPILEPSY (Not to include Psychosis Epileptic)
EPILEPSY, JACKSONIAN
HEMOTOMYELIA
HEMATORRHACHIS
HEMIPLEGIA, OLD
HEMMORRHAGE, CEREBELLUM
HEMMORRHAGE, CEREBRAL
HEMMORRHAGE, EPIDURAL
HEMMORRHAGE, MEDULIA
HEMMORRHAGE, PONS
HEMMORRHAGE, SUBDURAL
HERNIA, BRAIN
HICCOUGH
HYDROCEPHALUS
HYPOBAROPATHY (Aviator's Sickness) or Balloon Sickness)
MENIERE'S DISEASE
MENINGITIS, CEREBRAL
MENINGITIS, CEREBROSPINAL, ACUTE (Not to include Cerebrospinal Fever, Meningococcic)
MENINGITIS, CEREBROSPINAL, CHRONIC
MIGRAINE
MYASTHENIA GRAVIS
MYELITIS, TRANSVERSE
NARCOLEPSY
NEURALGIA
NEURITIS, MULTIPLE (State nerve)
NEUROSYPHILIS, SEROLOGICAL (Without neurological symptoms or signs other than laboratory findings)
PACHYMENINGITIS, CEREBRAL
PACHYMENINGITIS, SPINAL
PARALYSIS AGITANS
PARALYSIS, ASCENDING, ACUTE
PARALYSIS, BROWN-SEQUARD'S
PARALYSIS, (Otherwise unclassified, State nerve)
PARAMYOCLONUS MULTIPLEX
PARAPLEGIA, ATAXIC
POLIOMYELITIS, ANTERIOR, CHRONIC
RAYNAUD'S DISEASE
SCIATICA (Report as NEURITIS, SCIATIC)
SCLEROSIS, COMBINED
SCLEROSIS, DISSEMINATED
SCLEROSIS, LATERAL
SCLEROSIS, LATERAL AMYOTROPHIC
SPASM, HABIT
SPASM, NODDING
SPASM, SALTATORY
STAMMERING
STUTTERING
SYRINGOMYELIA
TABES DORSALIS

TABLE 4: NAVAL NOMENCLATURE

AMNESIA
CONSTITUTIONAL PSYCHOPATHIC STATE
Criminalism
Emotional Instability
Inadequate Personality
Inferiority Without Psychosis
Paranoid Personality
Pathological Liar
Sexual Psychopath
DEMENTIA PARALYTICA (Paresis)
DEMENTIA PRAECOX (Schizophrenia)
HYPOCHONDRIASIS
IDIOCY (Report as Mental Deficiency)
IMBECILITY (Report as Mental Deficiency)
MASTURBATION
MELANCHOLIA, INVOLUTIONAL
MENTAL DEFICIENCY (State whether Idiot, imbecile, or moron)
MORON (Report as Mental Deficiency)
NOSTALGIA (Homesickness)
PARANOIA
PARANOID STATE
PARESIS (Report as Dementia Paralytica)
PSYCHASTENIA (Report as Psychoneurosis)
PSYCHONEUROSIS, ANXIETY NEUROSIS
PSYCHONEUROSIS, COMPULSION NEUROSIS
PSYCHONEUROSIS, HYSTERIA
PSYCHONEUROSIS, NEURASTHENIA
PSYCHONEUROSIS, OCCUPATIONAL
PSYCHONEUROSIS, PSYCASTHENIA
PSYCHONEUROSIS, SITUATIONAL
PSYCHONEUROSIS, TRAUMATIC
PSYCHONEUROSIS, WAR NEUROSIS
PSYCHONEUROSIS, UNCLASSIFIED
PSYCHOSIS, EPILEPTIC
PSYCHOSIS, EXHAUSTIVE
PSYCHOSIS, ALCOHOLIC INTOXICATION
PSYCHOSIS, DRUG INTOXICATION (State drug)
PSYCHOSIS, INTOXICATION (Other exogenous toxins) State toxin)
PSYCHOSIS, MANIC DEPRESSIVE
PSYCHOSIS, SENILE
PSYCHOSIS, WITH INFECTIOUS DISEASE
PSYCHOSIS, TRAUMATIC
PSYCHOSIS WITH ORGANIC BRAIN DISEASE
PSYCHOSIS WITH OTHER DISABILITIES (State disability)
PSYCHOSIS, UNCLASSIFIED
SCHIZOPHRENIA (Report as Dementia Praecox)
SEXUAL PERVERSION
SHELL SHOCK (Report as Psychoneurosis, War Neurosis)
SOMNAMBULISM

LOOK TO THE FUTURE — HOLD THE WAR BONDS YOU BUY

Abridged Technique in Ambulatory Electro-shock Therapy

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Physicians in hospital and private office practice these days have their creativeness and resourcefulness frequently challenged in meeting the problem of limited personnel. My purpose in describing the method of giving electro-shock treatment in my private office to ambulatory patients evolved out of the need for capitalizing upon a minimal personnel—one assistant, my secretary. It is merely offered as suggestive to those who may be similarly situated or for those who may be contemplating giving electro-shock therapy on an ambulatory basis but have hesitated because of the personnel factor.

For some time I had entertained the idea of the desirability of ambulatory treatment of electro-shock therapy in private practice but hesitated to attempt it because visits to various hospitals and clinics seemed to indicate the need of two to four assistants besides the physician giving the treatment. There was no doubt in my mind that many patients coming to the office were being denied the striking positive results of the treatment. In many instances when hospitalization was mentioned for treatment or merely taking the treatment at a hospital or clinic on an ambulatory basis, resentment was registered. On the other hand, many patients felt kindly disposed toward taking treatment in the more or less home-like environment of a private office.

My problem was to devise a method whereby one assistant and I could, with full justice to the patient's needs, carry out the treatment requirements. Experience of one year has evolved the present technique and is considered fully adequate and yet most economizing in personnel. The following is a description of the method used.

A wicker office couch 6 feet long, 14 inches high and 25 inches wide is used. There is no metal in its construction. A thin, firm pillow is used for the head. A woolen blanket is placed over the upper sheet and over this is a specially constructed restraining canvas, 5½ feet long by 4 feet wide. Adjustable belts with buckles are sewed to the canvas in convenient places so that the patient is comfortably but adequately restrained to the couch. One belt is placed around the canvas in the region somewhat below the knees; the middle belt envelops the patient at the hips and the upper belt is placed across the upper chest.

The patient is asked to get onto the couch ("in bed") somewhat as he would get into a klondike sleeping bag. A triangular pillow (ordinary filling) is placed under the patient's back so that the wide part of the triangle meets the mid-thoracic region. The back is thus arched upwards; the shoulders swing over the top of the triangular pillow and down onto the head pillow. The arms are placed under the restraining sheet. Prior to turning on the electric current the various buckles are adjusted to meet the patient's needs. It should be mentioned that an additional buckle is placed around the foot end of the canvas and made secure to the legs of the couch; also another buckle is attached to the head end of the couch in order that it likewise may be anchored there. Thus it is impossible for the restraining canvas to be pulled up or down or sideways off the couch.

A small table 20 inches high by 24 inches long and 16 inches wide is set at the end of the couch. On it is placed the electro-shock machine (Model P, Rahm Instruments Company, New York). The voltage may be varied from 50 to 150 volts. An automatic shock-timer is set at either .1, .2, .3 or .4 seconds. The treatment switch requires two separate and distinct movements to eliminate possibilities of accidental closing. Its vertical switch-pole has attached to it a loop of cowhide shoe-lace 22 inches long. In the lower part of the loop is fitted a lever which when pressed down by the physician's foot springs the switch thus turning the current on. A rubber band encircles the head in order to retain the copper mesh electrodes. A rubber gag is inserted in the teeth before the switch is turned on. The physician's left hand is placed under the patient's chin with a gentle pressure upward thus retracting the head and stabilizing the gag between the teeth. The physician's right hand is placed over the patient's upper arm,

laterally, in its upper third. Pressure is directed inward and downward with the object of maintaining the head of the humerus snugly in its joint capsule and also pressing downward at the same time upon the patient's left shoulder. It is important that the physician (and also his assistant) when pressing down on the patient's upper arm and shoulder ride along with the patient's clonic convulsive movements, using variable pressure which may be indicated to control patient's movements.

It is the object of each treatment to bring about a grand mal reaction, preferably of the immediate rather than the delayed type. In the event that only a petit mal reaction occurs the voltage is increased. If this does not bring the desired result the duration of the shock is also increased.

Following the tonic and clonic phase of the convulsion the patient's arms are withdrawn from under the restraining sheet and artificial respiration is carried on. This is done on all patients. The physician takes care of the patient's left arm while his assistant manipulates the patient's right arm. Gentle but measured motions are brought about in such a way that the patient's arms extend up and above the patient's head; then they are brought back to the patient's lower chest laterally where pressure is gently but firmly applied synchronously by physician and assistant. These movements are at the rate of about 18 to 20 per minute. At the same time the physician assists return of respiration, after the apnea phase of the clonic convulsion, by raising and turning the patient's head to one side, and at times alternating this movement. A basin of water is kept on the treatment table and small amounts of this are dashed upon the patient's face. This also is an aid in stimulating respiration. It is interesting to note how oftimes a spray of water suddenly applied brings about immediate respiratory response; turning of the head frequently does likewise. An electric fan assists in furthering air movements.

In the event that psychomotor excitement is pronounced the belts of the restraining canvas are tightened accordingly. Using this technique experience has demonstrated that there is no need of more than one assistant. I have frequently made the remark that if there were more than one assistant present, it would be more of a hindrance than a help.

The patient is allowed to lie on the same couch on which the treatment is given for a period of approximately one hour. The younger patients usually require less rest than the older ones. The patient is also encouraged to sit in the adjoining waiting room for a variable period of time after the treatment.

It is recommended that the patient come accompanied by a relative or responsible friend. Breakfast is omitted the morning of treatment. Bladder and bowels are emptied before the treatment hour. When the patient returns to consciousness and good orientation, he is allowed to go home. An occasional patient comes for treatment alone and returns home alone, either walking or by taxi. An exceptional patient will return to work the same morning as the treatment, but usually this is deferred until the afternoon of the treatment day. Patient of course usually works the following day and returns for treatment on alternate days, averaging three treatments per week. In the event that mental confusion, neuromuscular incoordination or memory become much impaired, the spacing of treatments is increased to twice or even once a week. Usually one begins to find improvement after the fourth or fifth treatment. Occasionally there are some beneficial results after the first, second or third treatments. The average number of treatments is 8 per person. The upper range may extend to 20 or more, especially if there is a tendency to relapse within one or two months. Schizophrenics require more treatment as a rule than the manic depressive, involutional and reactive depressive groups.

In my own experience, curare has not as yet been given although this treatment may play a significant selective role, especially for elderly patients where the possibility of fracture and heart strain are greater. In my series of over 55 cases to date, in which over 375 grand mal reactions were observed, there has been only one fracture. This was in a 32-year-old white male, single, professional pianist. The fracture was of the medial one-third of the right humerus, intracapsular type. X-rays revealed a faulty bone texture approaching osteoporosis. This fracture occurred during the second grand mal treatment. Surgical treatment has brought about promising results although there is slight restriction of

motion of the entire shoulder girdle.

Usually the nearest relative is asked to sign a "Request for Treatment" form in which the physician is "released" from responsibility for untoward results. The factor of hazard is mentioned to the relative and in proper instances to the patient. However, since electro-shock therapy is a well-recognized and acceptable form of therapy, one does not overemphasize the hazard since it is certainly less than any "major operation" in which loss of consciousness is brought about.

It is hoped that the above suggestions may be helpful to psychiatrists interested in utilizing this form of total push therapy.

218 State Street.

An Evaluation of the Shock Therapies*

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The shock therapies, begun about 10 years ago as a modern innovation in psychiatric therapy, are still under critical evaluation in all psychiatric hospitals. The extremes of enthusiasm and skepticism regarding the results obtained have waned so that a more scientific evaluation of their worth can be made.

Schizophrenia

The over-enthusiastic initial reports of the value of hypoglycemic shock as a cure for schizophrenia have now swung to the conservative side. Over the nation its use is on the decline partly from loss of personnel (war factors) but more because satisfactory sustained results have not lived up to expectations. In fact many controlled studies indicate the final percentage of recoveries from schizophrenia are not higher in insulin treated groups than the controls.[1,2,3] Some observers still report encouragingly, especially in early cases with sustained results obtained in about 40% of cases,[4,5]

There is still controversy over technic, methods, prolongation, depth and number of comas as a factor in the various results. The fact remains that the treatment is far from specific and leaves much to be desired. The evaluation of schizophrenia, its diagnosis, prognosis and especially the effect of therapy is a very difficult problem.

One factor that has not been adequately investigated is weight gain. In my personal experience where good sustained results were obtained there usually occurs a marked weight gain. The improvement in nutrition as a cause in influencing recovery should be further studied and may provide the key to a more effective therapy. The psychological factors likewise have not been adequately evaluated in this therapy. Insulin therapy in subshock doses, for weight gaining purposes and the control of feeding problems has stood the test of time and is a very valuable symptomatic treatment in all undernourished psychiatric states.[6]

Subcoma doses of insulin are also valuable as a method of sedation. Under its effect anxiety and excitement are controlled causing them to disappear and permitting better psychotherapeutic approach to the patient. However in alcoholics I have seen unfavorable reactions. Large doses of insulin should be given with caution.

Metrazol therapy dropped in popularity since electro shock has proved to be as effective and less dangerous. Kolb and Vogl[10] have shown that electro-shock has been adopted more rapidly than either of the other methods. Already attempts to modify it under the name of electro-narcosis have been attempted but so far no superiority of results have been shown.

Electro shock is preferable for the following reasons: Less discomfort during and less after care following the treatment; amnesia lessens fear of treatment and a larger number of treatments can be given with a minimum of time and personnel.

Thus the question of preference between convulsant drugs and electric shock methods is largely settled. All authors agree upon the advantages of the electrically induced convulsions. No new drugs have been introduced that overcome the disadvantages and unpleasant side reactions of the drugs. Methods for sub-convulsive shock (petit mal) reactions have not produced good results. Grand mal

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seizures are essential.

The value of convulsive shock in schizophrenia is still controversial but seems to be repeating the experience of insulin. At first, over enthusiastic reports of high percentage cures,[7,8] now more conservative reports of relapses and ultimate disappointing results.[9,10] The controversy still goes on concerning technic, frequency and number of shocks to produce the best results. More radical therapists recommend a large number of treatments—up to fifty, producing profound organic sensorium defects equivalent to an amentia certainly more than is seen in lobotomized patients to produce sustained results especially in paranoidal types. Whether this intense therapy is justifiable is not yet established by the evidence so far presented.[11]

Even though convulsive shock may not be of sustained value in schizophrenia, it is a valuable symptomatic treatment in the control of acute excitement, paranoidal or aggressive patients. It is more justifiable to treat such a patient several times by induced convulsive shock than to resort to continuous restraint or excessive sedation. One also observes that hydrotherapy and packs are used less in institutions adopting convulsive shock.

One group of schizophrenic patients that respond better to convulsive therapy are those with affective components either mixed depressive or manic - like excitement states. This group improvement always brings up the question of diagnostic accuracy and may very likely account for many of the discrepancies in reports in the literature.

Affective Psychoses

There is no dispute as to the value of convulsive shock therapy in affective disorders. Since the initial reports[12] of the near specific tendency to shorten the course of a depression, it has been adequately confirmed by all investigators with a surprising uniformity of results 80-90% full or social recoveries. The manic excitement states respond almost as well but require more treatments and closer follow-up for possible relapses. At least twelve treatments should be given in acute manic syndromes, and continue to twenty if necessary.

There is some controversy as to type of depression in which the best results are attained; whether in true recurrent manic depressive patients the cycle is influenced, the exact technic (number of treatments) and the value of adjunctive therapy. However, the fundamental fact remains that a new uniformly successful treatment has been introduced into psychiatry that effectively terminates depressive psychoses whereas all previous methods have failed to produce such spectacular cures.

A study was made of the effect of convulsive therapy in the recurrent and relapsing types of affective states. A review of 103 cases of either recurrent types of manic depressive or cases that relapsed within 90 days following shock therapy was compared with a control group of 175 single admission cases that remained entirely well for from 2 to 5 years.

The recurrent types had an average of 2 previous admissions for psychiatric treatment prior to the era of shock therapy. The average duration of illness including hospitalization was six months. The average duration of the depressive episodes when later treated by shock therapy was two months. It was found that shock therapy prevented recurrence 2½ times as frequently in the female as the male. Thirty-two cases were typical cyclic manic depressive patients, twenty-three of them have remained well two or more years after the therapy. Nine have relapsed requiring one or more hospital treatments but all eventually made good social recoveries with additional therapy.

In comparing the number of days of hospitalization including shock therapy in the single admission sustained recovery group with the various relapsing cases it was found the sustained recoveries were held in the hospital on an average of 10 more days than the relapsed group suggesting that premature dismissal may be a reason for relapse. Best results were obtained if the patient is held six weeks. In comparing the average number of shock treatments, cases without relapse averaged 7.2 treatments while relapsed cases averaged 5.5 treatments. It would appear that the average depression should receive about 8 convulsive treatments. Sustained recoveries were better in the older age group, past 60 years of age, which includes 20 over 70 years, while the lowest rate of full recovery and tendency to recurrence was in the 21-30 age group.

This study if carried over a 10 year period

upon a large number of cases holds the answer to such important questions as to whether it is possible to break up cyclothymic personality, which type of case responds best, the value of other adjunctive therapy—psychotherapy, drugs, hormone or nutritional measures, etc.

Hazards of the therapy: The treatment is not without risks. A number of unexplained deaths have occurred, large numbers of patients with organic cardiovascular hypertensive disease have been successfully treated, yet some have died from coronary disease shortly after a treatment. Some believe[13] there is little increased hazard in this group. More studies need to be carried out, with follow-up observations of the cardiovascular functions after convulsive therapy. I have had a number of patients die suddenly from cardiovascular accidents, within a few weeks after full recovery from depressive psychoses and am not fully convinced that the therapy may not have hastened their deaths. It is true that many organic diseases complicating depressive psychoses are not affected by the therapy. Diabetes, pernicious anemia, spastic paralysis, pregnancy, hyperthyroidism, carcinoma, coronary disease, hypertension, cerebral thrombosis have all been associated with severe depressions or manic states and full recoveries occurred without organic complications. The only definite physical contraindications have been active pulmonary or systemic infections and cardiac decompensation.

Traumatic complications: Traumatic complications of drug convulsive shock were so great that many abandoned the treatment. With the advent of electro shock many have claimed the percentage and severity of traumatic incidents were markedly reduced. The problem of traumatic complications following electro shock has been dismissed too lightly by most investigators. Statements such as "complications are infrequent or eliminated or reduced to a minimum by proper restraints," dodge the issue. These statements give the uninitiated false security with the method. The facts are that straight electro shock produces severe convulsive seizures sufficient to fracture extremities, vertebrae, and to cause ligamentous and muscular ruptures with dislocations. Humeral and scapular fractures may occur more frequently in electro shock than with metrazol. Many such fractures have been reported.[14,15,16,18,17]

Aside from skeletal complications far too little attention has been paid to visceral complications . In 1930 veterinarians in packing houses attempted to stun cattle in slaughter houses with electricity applied to the head. It was found[19] that convulsions which ensued produced in lungs and other viscera petechial hemorrhages, indistinguishable from hemorrhagic septicemic states. These soft tissue injuries from straight convulsive shock undoubtedly occur in humans, result in unrecognized lesions within muscles, brain, lungs, etc., and probably account for the flareup of latent tuberculosis[20] thus making the therapy unsafe.

The fundamental problem is still the degree of muscular violence of the seizures, thus some safe, softening method is necessary. The best and safest method so far devised to prevent all traumatic complications is preliminary curarization.[21,22] The dose of standardized curare (Introcostrin - Squibb) is estimated from the normal body weight of the patient, 1 mg. per two pounds of body weight. The total intravenous injection time is 60 seconds. If too fast an injection is given, a shock-like reaction may be produced with a fall in blood pressure and obstructive respiration from relaxed pharnygeal muscles. Two minutes are allowed after completion of the injection for the peak of generalized muscle asthenia. At this point usually the patient is unable to lift his head and the electric current is applied and a convulsion induced.

Immediately following the convulsion respiration starts. In some cases the jaws and tongue may be relaxed and stridor or obstructive dyspnea appears. In these cases the angles of the jaws are held forward by the nurse for a few minutes until the effects of curarization wear off, similar to the technic employed for ether anesthesia. Very exceptionally or to hasten recovery from curarization an ampule of 1-2000 prostigmin may be given intravenously. Contrary to statements appearing in current literature, apnea is not produced or prolonged by curare. There is no effect upon the central respiratory mechanism, only shallow intercostal breathing and pharyngeal muscular relaxation can occur. The erroneous opinion still persists that curare increases the hazard of treatment. This is not

true as evidenced by the fact that over 100,000 curare-metrazol or electric treatments have been given with but one reported fatality and in that case neither proper artificial respiration nor prostigmin was used. The only contraindication to use of curare is myasthenia gravis.[23]

The physiologic changes produced by the shock therapies in cerebral metabolism is under intensive investigation. Alteration in the brain waves, conditioned reflexes, neurologic picture and chemical changes in the blood occur. While there may be temporary damage to intellectual function most of the change seems to be reversible. As yet there is no conclusive evidence of permanent brain damage. But the total number of shocks that may be safely given is not clear. The question of whether electric convulsions might initiate epilepsy, where E.E.G. studies have been made before and after treatment indicates that later seizures are not likely to develop unless the individual is predisposed constitutionally, i.e. already dysrythmic.

Future Problems for Investigation: The recurrent or relapsing affective disorder needs more study as to the causes of relapse, e.g., the effect of supplementary psycho-therapy. The ultimate effect of shock therapy in changing the manic depressive constitution requires a controlled study over many years.

What is the change in cerebral physiology coincident with a convulsive seizure that effectively changes emotional habit patterns? More accurate information concerning the neurophysiologic mechanism of a convulsion might lead to a simpler and more scientific therapy. What is the relationship between the organic confusional state produced by the seizure that relieves the pathologic emotional state? What degree of confusion gives the best therapeutic results? We need more accurate intellectual tests to determine this and such tests might lead us to more accurate prescription of effective treatment. Some patients might be given only a few treatments yet others require a much larger number, determined by an estimate of the proper degree of therapeutic confusion.

In evaluating all the present evidence for and against the shock therapies one is justified in recommending its use in suitable cases. We must await future research to assign its final place in psychiatric therapy.

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The Problem of Masturbation in Psychotherapy

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There are few behavior problems concerning which there has been more confused thinking than masturbation. Part of the confusion may be traced to semantic error in which one word has been used to describe a large group of related but heterogenous clinical syndromes. Dating back before biblical times, the handling of one's own genitals has been tabooed and punished so rigorously that the act has become almost universally regarded as being immoral, perverted and unhealthy to the point of causing mental disease. Even in modern psychiatric textbooks, the terms *masturbation* and *onanism* are defined as "self-abuse" or "self-pollution" without qualification as to whether the person is a child "playing with himself" or a deteriorated psychotic uninhibitedly devoting himself to the act. There has been little attempt to qualify the use of the terms to denote both the level and degree to which the act is indulged in. It seems desirable to differentiate between (1) the genital handling which is practiced by a large percentage of normal people without demonstrable deleterious effects, (2) the periodic self-relief from sex tension obtained by celibates from auto-eroticism, and (3) pathological degres of masturbation indulged in excessively and uninhibitedly by persons in various stages of mental disorder. Dogmatic pronouncements that masturbation is always completely wrong, bad, perverted, degenerate, unhealthy and forbidden must be objectively re-evaluted in the light of modern psychiatric knowledge.

There now appears to be general psychiatric agreement that excessive masturbation is a symptom rather than a cause of mental disorder. Statistical studies of sex behavior in the normal adult population indicate the high incidence of genital manipulations not only in childhood but also on adult levels of development. There does not appear to be much objective evidence that masturbation is an etiological factor in the causation of mental disease other than the oft-repeated observation that mental patients are lacking in self-control and inhibitory functions. If, as has been facetiously suggested, 99 and 44-100ths of the total population has indulged in the act at some phase of development it follows that a certain percentage will become mentally disordered and show masturbation as a symptom. Objective investigations of sex behavior in lower animals indicate that some form of genital manipulation is found in many species and approaches human forms in the higher monkeys. There is little evidence that genital manipulations even in excessive degrees have any deleterious physiological effects in lower animals and should therefore be regarded as an almost universal biological phenomenon.

Genital handling is a natural consequence of the morphology of the genital regions. Particularly in males, the increased sensitivity of the erogenous zones during sex excitement inevitably results in pleasurable manipulations followed by orgasm and release of tension after which the individual can resume routine activities. It does not appear to be of physiological consequence whether the orgasm and subsequent relief from tension is achieved through masturbation, heterosexual activities, or by the overflow mechanism of the nocturnal emission. The psychological consequences of these different patterns may be much more significant and are determined by individual training and the social conditions under which the act occurs. Every child sooner or later experiences novel and disturbing erotic sensations which he quite naturally explores either by himself or in the company of more experienced preceptors. If the child has learned the basic rules of self-control and discipline, he usually gains mastery over his impulsive life and becomes able to indulge in healthy outlets without feelings of guilt or morbid preoccupation with the subject. Masturbation becomes dangerous to mental health when (a) it is associated with major anxiety, guilt or obsessive-compulsive reactions, (b) it becomes such a morbid preoccupation as to interfere with or replace normal hetersexual

development, or (c) it is practiced so frequently as to be detrimental to physical health and vitality.

In mentally healthy persons, genital handling even to the point of orgasm and ejaculation may be regarded as a physiological act when its objective is relief from sex tensions in the absence of opportunity for legally sanctioned heterosexual relationships. There exist wide variations in the intensity of sex impulses in normal people, some persons experiencing tension almost daily while others go for weeks or months without nocturnal emission or the urge to secure relief. It is difficult for the emotionally stable and well-controlled individual to appreciate the intensity and urgency which emotional drives may have in more excitable personality types. Some people have little difficulty in achieving self control because they have relatively little to control. It may be normal for one individual to seek relief two or three times a week while another person is satisfied with one or two sex experiences monthly.

Clinical Studies

The clinical material to be reported was obtained from psychiatric case studies made by second year medical students as part of the requirements of the course on psychobiology. Autobiographical studies were made toward the end of the year after the students had become oriented toward psychiatric problems. The written studies were amplified by individual conferences and many students became so interested that they uninhibitedly related the most intimate details of their psychobiological development. In an unselected group of 100 second year medical students, more or less habitual masturbation was admitted by 78% of the group with the distributribution curve showing two distinct peaks. About 20% of the cases had begun genital handling between ages 5 and 8 as compared with a larger group of 58% which did not acquire the habit in earnest until about 12-13 years. This data must be considered as suggestive rather than conclusive since rarely was it possible to definitely determine the exact age when masturbation as an habit began. Genital handling before 8 or 10 must be interpreted as having different significance from that occurring in adolescence. During the earlier period the act is usually impulsive and infrequently practiced, producing a vague sensual pleasure unaccompanied by ejaculation, orgasm or sex phantasy. During adolescence masturbation acquires much more significance and is usually premeditated, carried through to orgasm and associated with well-developed sex phantasy. Much can be learned from a detailed consideration of individual case histories concerning the development of the habit of masturbation.

Case 1. Male, white, age 26, unmarried. Second year medical student considered very studious and serious; usually introverted but adequate in social gatherings. Family history and early development not unusual.

Sex activity first reported at age 4 when attempted mutual exhibitionism and genital handling with a playmate who had been placed in crib. First vague daydreams about a feminine classmate at age 8. Learned about sex between ages 8 and 10, interested in lewd jokes of classmates. Only active heterosexual contact in this period involved attempt to examine only sister's genitals. Subjected to homosexual attack by older boy at age 12; attempted fellatio with schoolmates several times at age 13-14.

Masturbation as a habit began about 10. Handled genitals several times weekly usually in bed at night and associated with phantasies about sex play with girl friends but never experienced orgasm or ejaculation. Erections occurred quickly and sometimes persisted through several hours of phantasy. Until age 26 never masturbated vigorously enough to experience the pleasures of ejaculation. Many nocturnal emissions, though, and occasional spontaneous emissions while dancing, etc. Heterosexual interest began actively at 14 but confined to adolescent mooning until age 10 when petting first occurred. Sex relations with nurse at 24.

This student complained most about daily sex phantasies which preoccupied most of waking hours. Nothing interested him intensely except sex phantasies involving girl friends. Could not get the subject off his mind in spite of violent exercise, keeping away from girls, etc. Partial relief at age 24 when weekly dates with the nurses served to keep tensions within bearable limits.

Advised to relieve himself manually once or twice a week if sex preoccupations became obsessive. No guilt reactions or other undesir-

able personality reactions at end of three years.

This brief case summary does not give an adequate idea of the complexity and variety of erotic phantasies which this student related. His fertile imagination had explored the fabled "artus amandi" most completely even to the point of inventing some interesting variations of his own. Every attractive feminine acquaintance was ingeniously interpolated into this life of phantasy which the student had never before revealed to another person. To some extent these phantasies took the place of promiscuous love affairs since he was very critical and fastidious about the young ladies he took out. His total adjustment to life was good and there was no hint of incapacitating mental disability. In our opinion, judicious self-relief enabled him to get along with a maximum of stability and lessened the temptation to engage in promiscuous affairs.

Case 2. Male, white, age 23, unmarried. Second year medical student, considered bright but not outstanding in studies or outside activities. One of the more retiring members of his class who is generally regarded as being conservative and well adjusted.

Overt sex activity first noted at about age 5 when was reprimanded for rubbing and manipulating his genitals through his pants. About age 8 he and a little girl undressed and played with each other a few times until detected by parents and severely punished. Recalls mutual masturbation and felatio with other boys during two summer vacations about age 13. Several puppy loves in high school never went beyond necking. Sex relations at 21 with college classmate. Several other affairs have terminated in promiscuous relations, one requiring an abortion.

This student came for psychiatric consultation because of mild guilt feelings over his sexual appetites which he considered excessive. After once having experienced the pleasures of sex relations, he developed a compulsive urge to have them on every date. Once aroused, he could think of nothing else until after ejaculation when he frequently experienced shame and disgust over having been so uncritical and aggressive toward girls which he now realized he had nothing in common with. During sex excitement, rational values and common sense left him and he did things which later seemed incomprehensible. For example, his excitement was so urgent that he rarely took contraceptive precautions and on at least one occasion conception occurred, necessitating an abortion. He reports that on several occasions he impulsively and deliberately attempted to impregnate his partner even though he was later stricken with remorse and feelings of guilt over having had such impulses.

Since past experience had repeatedly demonstrated his inability to voluntarily regulate his behaviour when sexually excited, it was suggested that the lesser of two evils was to relieve himself judiciously whenever sex tensions became unbearable.

The therapeutic suggestion concerning self-relief was accepted and has apparently worked out very satisfactorily. This student later married and continues to carry out the act when his wife is indisposed or absent. There has been no apparent deleterious effect on the total personality and if anything he is better integrated and adjusted than during his amorous interludes. Is not judicious masturbation much more desirable than the potentially disastrous impulsive behavior which he previously indulged in?

Case 3. Male, white, age 23, unmarried. Excellent family background; parents intellectual and raised children according to progressive educational ideas. Father disciplined by friendly talks and gave almost unlimited freedom.

Sex excitement first at age 5 when was fondled by attractive young woman. Interested in little girls at age 8, actually attempted penetration. Sex relations with penetration but no emission at age 12; frequent necking parties began about this age. Masturbation several times weekly between ages 13 and 19 when outlets unavailable. Regular sex relations begun at age 16; has been intimate with at least 15 "nice" girls in addition to uncounted visits to brothels. Is very enthusiastic about each new girl friend and is jealous of any attentions she may give others. After a few weeks becomes unresponsive. Feels that other people think he is inferior.

This case is included to demonstrate the interchangeability of normal sex relations and masturbation in an apparent sex psychopath who is adjusting well enough superficially to have gotten through the second year in medi-

cal college. He stated that he would probably have been even more promiscuous if he had not practised self-relief frequently with phantasies of normal intercourse whenever heterosexual outlets were not available between ages 13 and 19. The question might be asked if it would not have been better to have limited himself to masturbation instead of becoming involved in a series of promiscuous relationships which cannot but lead to unhappiness and maladjustment on the part of all concerned. This young man gave the impression of having become fascinated by the hunt for women in the same manner as game hunters stalk wild animals. A more intensive psychoanalysis would be indicated in this case to discover the psychogenesis of this disorder of one function in an otherwise adequate personality.

Discussion

In many life situations, the important consideration is not so much what a person does as how he does it. Apart from the general rule that it is unwise to go to excesses in anything, the appropriateness of any behavior pattern must be related to the specific situation in which it occurs. The comments to follow are not intended to apply generally as a part of the regular therapeutic routine but only to specific individual situations at the discretion of the psychiatrist.

There appear to be certain situations in which genital handling is normal and conducive to improved emotional adjustment providing it is practiced judiciously and with restraint. Judicious masturbation seems to be indicated in mentally healthy individuals where it is desired to dissipate obsessive-compulsive emotional urges which would interfere with adjustment unless intelligently handled. Among the criteria for determining the advisability of self-relief are (1) the presence of periodic strong sexual urges in the absence of normal heterosexual outlets, (2) where unreleased sex tensions have acquired obsessive-compulsive character and color all behavior, and (3) when frustration, excessive phantasy, insomnia or promiscuity lead to psychological or social maladjustment. The crucial question is whether the dissipation of emotional tensions by masturbation is not greatly preferable to alternative, potentially disastrous social outcomes? Is it better for a sexually aroused child to lie sleepless in bed for several hours indulging in sex phantasies which may eventually acquire obsessive fascination, or to release these tensions by judicious masturbation following which sleep quickly follows? Is it unhealthy for the celibate university student to relieve himself periodically in order to relieve compulsive urges which lead his classmate to roam the streets looking for a sex partner who may involve him in venereal infection and social maladjustment? Is masturbation undesirable in situations where it enables a person to keep emotional drives under reasonable thresholds of control and makes possible rational intellectual judgments which were previously disrupted by dimly understood affective compulsions?

This paper should not be construed as recommending masturbation as a routine part of psychotherapy. Obviously it is a difficult problem to insure that self-relief will be judiciously utilized and definite recommendations are contraindicated except where the patient is mature and stable enough to exert enough self-control to avoid excesses. Perhaps a definite recommendation concerning self-relief should never be made, the therapist limiting himself to suggestions that judicious masturbation may be permissible and not detrimental to health in certain situations. In all cases, however, the physician should take a non-critical and non-condemnatory attitude toward patients admitting masturbation, reserving prohibitions only for those cases reporting excessive indulgence or other evidences of maladjustment.

It is of theoretical interest to note that it is possible to uncover the secret and intimate details of a person's life by methods other than psychoanalysis. It is sometimes astounding to discover the ramifications of the phantasy life of a patient who gives little outward indication of being other than completely conventional and uncomplicated. How much that we are able to uncover is unconscious and how much is consciously appreciated by the patient himself but kept secret and even under duress denied? Much that has been considered repressed may actually be only voluntarily suppressed by the patient reluctant to uncover the most intimate details of his inner life.

Summary

There is urgent need for an objective psy-

chiatric evaluation of the whole problem of masturbation. Confused thinking has lead to many dogmatic statements that masturbation is invariably wrong, perverted and mentally unhealthy. More modern viewpoints suggest that masturbation is a symptom rather than a cause of mental disease and that there are many situations where judicious self-relief may be completely normal and conducive to mental health. Masturbation becomes unhealthy when it is practiced to excess, interferes with normal heterosexual adjustments, or is associated with major anxiety, guilt or obsessive-compulsive reactions.

Three selected case histories of second year medical students have been presented to illustrate some frequently encountered problems concerning masturbation. It is suggested that judicious self-relief may be advisable in mentally healthy persons when (a) periodic strong sex urges exist in the absence of normal outlets, (b) where unreleased tensions have acquired obsessive-compulsive character and color all behavior, and (c) when frustration, excessive phantasy, emotional instability or promiscuity lead to psychological or social maladjustment.

Returns of Schizophrenics Following Shock Therapy

A Report on Patients Released Five to Seven Years Ago*

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A criticism of the results of shock therapy is that the return rate of patients released from mental hospitals is high. There are various difficulties in evaluating results from shock therapy that are gradually becoming generally known. In order to clear up any misunderstanding, a paper discussing results should cover the following elements:

First: The type of insulin shock therapy used should be definitely described and the depth of the shock used clearly set forth; also, the length of time the patient is treated and whether or not adjuvant methods were used to increase the intensity of the shock reaction.

Second: The results, as far as possible, should come from one hospital where the diagnostic criteria, the treatment and surroundings are as constant as possible.

Third: The majority of the patients treated should be from a unified district so that a close check can be kept on their condition and adjustment to the community.

Our method of shock treatment is to use insulin in sufficient dosage to produce as profound a coma as is consistent with the safety of the patient and we almost always carry our patients through a series of fifty treatments. In approximately 70% of the cases we add, after the twentieth treatment, electric shock or metrazol in the third hour of the insulin reaction in sufficient dosage to produce a definite epileptiform convulsion.

Since the beginning of the use of shock therapy in 1937, it has been under the direction of the same physician and the medical direction of the hospital has been in the same hands. The physical equipment, the dietary and occupational therapy used in conjunction with shock therapy have been the same except for enlargement.

The New Jersey State Hospital at Trenton accepts patients from certain counties in southern and western New Jersey. There has been no change since the beginning of treatment in the districts served. Therefore, any recurrence of psychotic symptoms requiring further hospitalization would necessitate the patient's return to this hospital. Of course, a few patients have left the state but in most instances, if they have been hospitalized, we can check this by request for clinical abstracts.

Patients hospitalized in other hospitals, as far as known to us, are placed in their proper category in the following summation: From the spring of 1937 until June 30, 1939, two hundred fourteen schizophrenics completed a course of shock therapy. Of these, 153 or 71.5%, were released. On June 30, 1944, of the

*From New Jersey State Hospital, Trenton, New Jersey.

153 released, 125, or 81.7%, were out of the hospital. Of this 81.7%, 105, or 68.6%, had not returned; 20, or 13.1%, had returned and were released following further shock treatment; 28, or 18.3%, returned to the hospital and to date are still in residence here.

Of the 20 patients who returned and went out again, 16 had one return. The following table shows the length of time they were out of the hospital and the time out following their second release:

	Less than 1 Yr.	*1-2 Yrs.*	*2-3 Yrs.*	*3-4 Yrs.*	*4-5 Yrs.*
Time out before return	2	4	2	4	4
Time out after second release	1	6	2	4	3

Four patients had two returns, remaining out before the first return for periods of eight months, one year, two years, and three years; and, before the second return, one year, two years, one year, and one year, respectively. Following the second release, they had been out for periods of one year, one year, three years, and two years, respectively.

The 28 patients who returned and are still in the hospital showed that eight were out less than six months, four between six months and one year, six from one to two years, six from two to three years, and four over three years.

These patients were out of the hospital a total of 2409 weeks which, at the New Jersey State Hospital weekly rate of $10, was a saving of $24,090. Roughly, it costs approximately $10 a week extra to treat a patient with insulin; therefore, there was a net saving of over $21,000 in maintenance costs. Possibly some of these patients would have left the hospital without treatment but observation of their type shows they were the least likely to have been released.

All discharged patients are checked for at least one year by social workers and we frequently request and receive written reports from a member of the family on the patient's adjustment. It is interesting to note that frequently these letters contain the statement that the patient is better than ever before. While little reliance can be placed on these statements, we do think that it is evidence that at least the patients were as well as they were before the onset of their psychosis.

Unquestionably the environment is the principal etiological factor in the return of many of these patients but the difficulty of changing the environment of the average state hospital admission can readily be recognized.

In regard to the type of schizophrenia, our experience has been that simple, catatonic, hebephrenic and mixed types respond about equally well, but the paranoid type shows a poor response, having the highest percentage of failures as to release and the highest return rate. Half of our returns are of this type, whereas they made up only approximately 28% of the patients treated.

Conclusions

1) Shock treated schizophrenics observed for a period of from five to seven years show that of those released 81.7% were out of the hospital and 68.6% had never had a return of their psychotic symptoms.

2) Of the patients who returned and remained in the hospital, their release in the community for the varying periods saved the hospital a sum of money sufficient to pay for the treatment of two hundred additional cases.

3) In our experience, a higher percentage of schizophrenics can be released to take their place in the community and remain in an improved or recovered state by the use of shock treatment than can be expected from any other method of treatment at this time.

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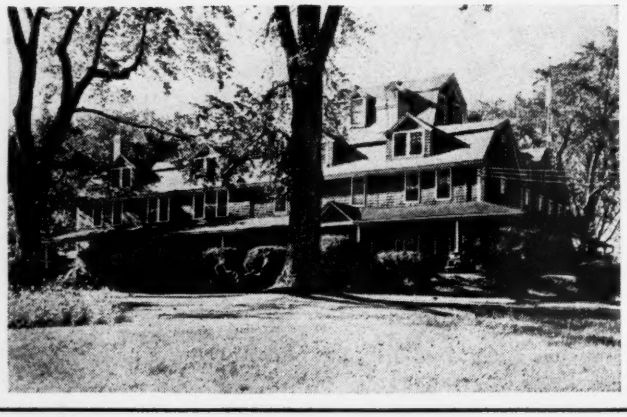

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